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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,477	04/27/2001	Robert Anderson Malaney	3961.46US01	9130
23552	7590	12/13/2005		
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903				
			EXAMINER HOM, SHICK C	
			ART UNIT 2666	PAPER NUMBER

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/844,477	<b>Applicant(s)</b> MALANEY ET AL.	
	<b>Examiner</b> Shick C. Horn	<b>Art Unit</b> 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-60 and 65-72 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 57-60 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-11, 14-18, 21-25, 28-32, 35-39, 42-46, 49-53 and 56 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 12, 13, 19, 20, 26, 27, 33, 34, 40, 41, 47, 48, 54, 55 and 65-72 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments filed 9/29/05 have been fully considered but they are not persuasive.
2. In response to applicant's arguments in pages 22-24 of the remarks against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. *Raisanen et al.* teach constraining transmission of input traffic based upon constraint parameter (see abstract which recite traffic shapering of incoming packet in accordance with traffic shaping parameters) and *Boda et al.* teach determining the constraint parameter which is dependent upon a probability density function to produce output traffic having a pre-determined entropy bound (see col. 3 lines 12-24 which recite the policing mechanism for determining and comparing the probability density function of the ideal non-violating traffic and the actual traffic against the error signal to shape the traffic). In this case See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-4, 7-11, 14-18, 21-25, 28-32, 35-39, 42-46, 49-53, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Raisanen et al. (6,633,540) in view of Boda et al. (5,687,292).

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Regarding claims 1, 8, 15, 22, 29, 36, 43, 50:

Raisanen et al. disclose a method, computer readable memory medium, computer program, of shaping, policing, input packet traffic, said method comprising steps of: determining a constraint parameter; and constraining, based upon said parameter, transmission of the input packet traffic, thereby to produce output packet traffic having a pre-determined entropy bound (see abstract which recite the traffic shaper for shaping real-time traffic and best-effort traffic in accordance with traffic shaping parameters; col. 1 line 56 to col. 2 line 3 which recite the traffic shaper being integrated into a computer readable medium for use in a processor; col. 2 line 57 to col. 3 line 12 which recite checking constraint for allowing transmission of incoming best-effort packet and incoming real-time packet and for output of the incoming packet; and col. 4 lines 32-48 which recite the requirement to limit packet loss clearly anticipate determining a constraint parameter and constraining, based upon the parameter, transmission of the input packet traffic having a pre-determined entropy bound).

Raisanen et al. disclose all the subject matter of the claimed invention with the exception of wherein the constraint parameter dependent upon a probability density function as

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recited in claims 1, 8, 15, 22, 29, 36, 43, 50; wherein prior to the determining step, the method comprises a further step of: selecting a type of the probability density function as in claims 2, 9, 16, 23, 30, 37, 44, 51; wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated in conjunction with the determining step, thereby permitting said determining of the constraint parameter as in claims 3, 10, 17, 24, 31, 38, 45, 52; wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated prior to the determining step, thereby permitting said determining of the constraint parameter as in claims 4, 11, 18, 25, 32, 39, 46, 53; and wherein the probability density function is an exponential function as in claims 7, 14, 21, 28, 35, 42, 49, 56.

Boda et al. from the same or similar fields of endeavor teach in the related technique section that it is known to provide the constraint parameter dependent upon a probability density function (see col. 3 lines 12-24 which recite the policing mechanism using a probability density function to shape the traffic); wherein prior to the determining step, the method comprises a further step of: selecting a type of the probability density function and wherein the probability density function is

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an exponential function (see col. 12 lines 20-45 which recite the selected type of density function being exponential); wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated in conjunction with the determining step, thereby permitting said determining of the constraint parameter; and wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated prior to the determining step, thereby permitting said determining of the constraint parameter (see col. 5 lines 11-31 which recite distributing transmission capacities among the links of the network to achieve maximum carried traffic and the optimization task and col. 11 line 38 to col. 12 line 10 which recite weights being given in advance to obtain the set of link capacities; and the new optimal link blocking probabilities being computed using linear programming based on these capacities values clearly reads on the probability distribution function being evaluated prior and in conjunction with the determining step, respectively). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide the constraint parameter dependent upon a probability density function; wherein prior to the determining step, the method comprises a further step of:

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selecting a type of the probability density function; wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated in conjunction with the determining step, thereby permitting said determining of the constraint parameter; wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated prior to the determining step, thereby permitting said determining of the constraint parameter; and wherein the probability density function is an exponential function as taught in the related technique section by Boda et al. in the communications method of Raisanen et al. The constraint parameter being dependent upon a probability density function; wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated in conjunction with the determining step, thereby permitting said determining of the constraint parameter; wherein a probability distribution function which is derived from the probability density function of the selected type is evaluated prior to the determining step, thereby permitting said determining of the constraint parameter; and wherein the probability density function is an exponential function can be implemented by using the technique of making the constraint



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parameter to dependent upon a probability density function of Boda et al. in the traffic shaper of Raisanen et al. The motivation for using the technique of making the constraint parameter to dependent upon a probability density function as taught by Boda et al. in the communication method of Raisanen et al. being that it provides more efficiency for the system since the system can optimize the operation of the network according to a given objective density function.

#### ***Allowable Subject Matter***

6. Claims 57-60 are allowed.

7. Claims 5-6, 12-13, 19-20, 26-27, 33-34, 40-41, 47-48, 54-55, 65-72 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meizlik et al. disclose a method and computer program product for efficiently and reliably sending small data messages from a sending system to a large number of receiving systems.

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Ginzboorg disclose traffic measurement in a communication system.

Hasegawa disclose a mobile communication system enabling efficient use of small-zone base stations.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

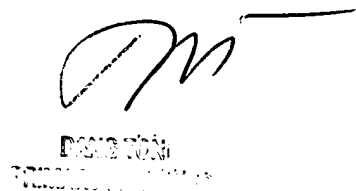
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can

normally be reached on Monday to Friday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH



The block contains a handwritten signature in black ink, which appears to be 'M'. Below the signature is a rectangular official stamp. The stamp contains the text 'EXAMINER' in a bold, sans-serif font, with 'TAMARA L. HARRIS' printed below it in a smaller font.